

Excel functions pdf

Name	Home Town	Hours of Community Service
Bill Adams	Charlotte	10
Sandra Brown	Dallas	13
Ted Carpenter	Winston	10
Ooug Dublin	Greenville	9
Bob Edwards	Wilson	6
Fred Fortner	Rocky Mount	8
Ralph Green	Charlotte	23
Dan Hunter	Asheville	15
Ted Jones	Concord	10
Carol Kitchens	Asheboro	11
Bob Dale	Boone	7
Dale Green	Washington	17
Matt Hardison	Goldsboro	12
Jenny Jones	New Bern	7
Laura King	Greensboro	20
Candy Moore	Graham	12
Tom Anderson	Sanford	12
Rick Nelson	Richlands	10
Cathy Smith	Jacksonville	9
Donna Shirley	Charlotte	11
Carol Short	Wilmington	8
Jennifer Watson	Clinton	25
Lawrence Madison	Surf City	21
Paul Walston	Boone	15
Pedro Rogers	Henderson	13
Frank Black	Coneloe	4
Harry Hammer	Bunn	12
Melvin Bower	Statesville	11
Donald Priest	Asheville	16
Ronnie Rivers	Blowing Rock	9
Missy Brown	Henderson	22
Gary Schell	Bunn	20
John Henderson	Clinton	12
Paul Isenberg	Nags Head	10
Hank Greenburg	Wilmington	18
Randy White	Statesville	10
June Flowers	Reidsville	23
Bob Jenkins	Garner	
Bo Lewis	Randelman	
Ray Cline	Cary	
Jane Cline	Cary	
Pam Bookholt	Charlotte	

Sort

Information: There may be times when you want to rearrange your data. We typically use the sort tool.

Let us suppose we would like to resort this data according to hours of community service. We want to list the students from the most hours of community service to the least hours.

Steps:

1. Block the entire set of rows to be sorted (1-43). Do this by dragging your mouse over the numbers to the left of the rows. This will highlight each row. (*DO NOT* just block the cells or column where hours of community service are located. If you do this, you will mess up your data since this information will be sorted but the name and home town will not. In grade school we would call this situation a fruit bowl turnover.)
2. Click on Data on the toolbar
3. Click on Sort
4. Then select the column on which to sort (either Column C or Hours of Community Service)
5. Then select the descending option to go from most to least.
6. Then click OK

Note: This is just a sample image of the Sort dialog box and does not contain data related to this specific exercise.

Sort [?] [X]

Sort by: [Column C] [v] ☒ Ascending ☐ Descending

Then by: [Column D] [v] ☒ Ascending ☐ Descending

Then by: [Column A] [v] ☒ Ascending ☐ Descending

My list has: ☐ Header row ☒ No header row

[Options...] [OK] [Cancel]

Questions to Answer:

1. Which student worked the most hours?
2. Which student worked the least hours?
3. How many students did 20 or more hours?

Fill

Information: To save typing, Excel will automatically fill in information for you

Activity 1:

1. Type January in A1
2. Highlight A1, click your mouse on the tiny box in the lower right corner of the cell and drag across to Column N and then let go.
3. Highlight A1, click your mouse on the tiny box in the lower right corner and drag down to line 12 and then let go.
4. Repeat Step 2 but hold the control key down as you drag.

Activity 2:

1. Do the same thing as Activity 1 but type Monday in A1 instead.
2. Repeat Step 2 but hold the control key down as you drag.

Activity 3

1. Do the same thing as Activity 1 by type 10:30 AM in A1 instead.
2. Repeat Step 2 but hold the control key down as you drag.

Activity 4

1. Type 1 in A1, 3 in A3 and 5 in A5.
2. Block cells A1, A2 and A3, click your mouse on the tiny box in the lower right corner of the cell and then drag to the right to column N.
3. Block cells A1, A2 and A3, click your mouse on the tiny box in the lower right corner of the cell and then drag down to row 12.
4. Repeat Step 2 but hold the control key down as you drag.

Activity 5

1. Type Ann in A1, Beth in A2 and Sue in A3.
2. Block cells A1, A2 and A3, click your mouse on the tiny box in the lower right corner of the cell and then drag to the right to column N.
3. Block cells A1, A2 and A3, click your mouse on the tiny box in the lower right corner of the cell and then drag down to row 12.

Activity 6

1. Type January 3 in A1 and January 10 in A2.
2. Block cells A1 & A2, click your mouse on the tiny box in the lower right corner of the cell and then drag to the right to column N.
3. Block cells A1 & A2, click your mouse on the tiny box in the lower right corner of the cell and then drag down to row 12.

Activity 7

1. Experiment with other words or numbers or combinations.

Name	Home Town	Hours of Community Service	Exam 1	Exam 2	Exam 3	Exam Average
Bill Adams	Charlotte	5	81	71	77	58.5
Sandra Brown	Dallas	13	71	90	68	
Ted Carpenter	Winston	10	75	70	90	
Doug Dublin	Greenville	9	77	99	78	84.66667
Bob Edwards	Wilson	6	93	90	85	
Fred Fortner	Rocky Mount	8	87	91	85	#VALUE!
		116				

Question to Answer: Four formulas have been entered (the purplish cells). Three of the formulas contain errors. Click on each cell and then enable the auditing feature. Does this help you identify where the errors are in the formula? Which formula is correct?

You might be able to easily find the errors without using the auditing function in this exercise, but if you had a large spreadsheet with complex formulas, this feature is invaluable!

Auditing

Information: If you want to visually see what is happening when you type in a formula, turn on the auditing feature. This helps you find possible errors in your formulas.

Steps:

1. Highlight the cell with the formula that you want to audit
2. Click on Tools, Formula Auditing and select Trace Precedents to see what cells are used in the current formula. Arrows showing all the cells involved in the formula will appear
3. After you are done, click on Tools, Auditing, Remove Arrows to make the arrows go away.

CLUB FRUIT SALES

	Boxes of Apples Sold	Boxes of Oranges Sold	Boxes of Tangerines Sold	Total Boxes Sold by each student	Value of Apples (\$15 a box)	Value of Oranges (\$25 a box)	Value of Tangerines (\$27 a box)	Total Value of Fruit Sold by each student	Tax (6% of total sales)	Amount to Collect (tax + total sales)	Student Commission (25% of total sales)	Amount to Send to Supplier (50% of Sales)	Club Profits (What is left excluding taxes)
Student 1	2	6	4	12	\$ 30.00	\$ 150.00	\$ 108.00	\$ 288.00	\$ 17.28	\$ 305.28	\$ 72.00	\$ 144.00	\$ 72.00
Student 2	3	4	5	12	\$ 45.00	\$ 100.00	\$ 135.00	\$ 280.00	\$ 16.80	\$ 296.80	\$ 70.00	\$ 140.00	\$ 70.00
Student 3	4	2	6	12	\$ 60.00	\$ 50.00	\$ 162.00	\$ 272.00	\$ 16.32	\$ 288.32	\$ 68.00	\$ 136.00	\$ 68.00
Student 4	5	1	7	13	\$ 75.00	\$ 25.00	\$ 189.00	\$ 289.00	\$ 17.34	\$ 306.34	\$ 72.25	\$ 144.50	\$ 72.25
Student 5	0	5	3	8	\$ -	\$ 125.00	\$ 81.00	\$ 206.00	\$ 12.36	\$ 218.36	\$ 51.50	\$ 103.00	\$ 51.50
Student 6	1	6	5	12	\$ 15.00	\$ 150.00	\$ 135.00	\$ 300.00	\$ 18.00	\$ 318.00	\$ 75.00	\$ 150.00	\$ 75.00

Protection

Information: If you have a worksheet that other people may be using and you don't want them to accidentally delete a formula or mess with it, you can protect selected cells. This is a two step process.

1. First block all the cells in the worksheet you want to allow people to type in, go to Format, Cells, Protection and click off Locked. Then
2. Block all the cells you want protected in the worksheet, go to Format, Cells, Protection and click on Locked.
3. Now go to Tools, Protection and click on Protect Worksheet.

People will be able to type in the unlocked cells but not the locked cells.

To unlock the worksheet, you have to click on Tools, Protection, and then select Unprotect Sheet. This action can be password protected if you want to get serious about protecting a worksheet.

Question to answer: Assume that your students turn in sales slips when they sell fruit. Your club treasurer is responsible for entering these data in the spreadsheet. You have created this spreadsheet but locked a number of the cells. Which cells are not locked?

Can you move this box to a different location on the page?

Go to Tools, Protection, Unprotect Sheet, then see if you can move this text box or edit the cells. Then turn the protection back on.

Name	Home Town	Hours of Community Service
Bill Adams	Charlotte	5
Sandra Brown	Dallas	13
Ted Carpenter	Winston	10
Doug Dublin	Greenville	9
Bob Edwards	Wilson	6
Fred Fortner	Rocky Mount	8
Ralph Green	Charlotte	23
Dan Hunter	Asheville	15
Ted Jones	Concord	10
Carol Kitchens	Asheboro	11
Bob Dale	Boone	7
Dale Green	Washington	17
Matt Hardison	Goldsboro	12
Jenny Jones	New Bern	7
Laura King	Greensboro	20
Candy Moore	Graham	12
Tom Anderson	Sanford	12
Rick Nelson	Richlands	10
Cathy Smith	Jacksonville	9
Donna Shirley	Charlotte	11
Carol Short	Wilmington	8
Jennifer Watson	Clinton	25
Lawrence Madison	Surf City	21
Paul Walston	Boone	15
Pedro Rogers	Henderson	13
Frank Black	Conetoe	4
Harry Hammer	Bunn	12
Melvin Bower	Statesville	11
Donald Priest	Asheville	16
Ronnie Rivers	Blowing Rock	9
Missy Brown	Henderson	22
Gary Schell	Bunn	20
John Henderson	Clinton	12
Paul Isenberg	Nags Head	6
Hank Greenburg	Wilmington	18
Randy White	Statesville	10
June Flowers	Reidsville	23

Text to Columns

If you copy data from some other program that is in a text format and paste it into Excel, you can convert it to columns by going to Data, and selecting Text to Columns and supplying the appropriate information.

If you enter the data into a spreadsheet you should compartmentalize all data as much as possible "Cary, NC 27511" should be in three different cells.

Activity:

Can you list the students in column A in alphabetical order? No! That is because the first name is listed first. We need to divide this column into two - one column for the last name and one for the first name.

Steps:

1. We need to first insert a blank column immediately to the right of Column A. Block Column B, then click Insert, Column.
2. Select the cells A2:A34.
3. Click on Data
4. Click on Text to Columns
5. Make sure Delimited is checked then click on Next
6. Select Space and then click on Next
7. Select Text and then click on Finish. Say OK when asked if you want to overwrite the next column (that is OK because it is blank because we just inserted it.)

After you divide the data, you can then sort the data.

Name	Home Town	Hours of Community Service
Bill Adams	Charlotte	5
Sandra Brown	Dallas	13
Ted Carpenter	Winston	10
Doug Dublin	Greenville	9
Bob Edwards	Wilson	6
Fred Fortner	Rocky Mount	8
Ralph Green	Charlotte	23
Dan Hunter	Asheville	15
Ted Jones	Concord	10
Carol Kitchens	Asheboro	11
Bob Dale	Boone	7
Dale Green	Washington	17
Matt Hardison	Goldsboro	12
Jenny Jones	New Bern	7
Laura King	Greensboro	20
Candy Moore	Graham	12
Tom Anderson	Sanford	12
Rick Nelson	Richlands	10
Cathy Smith	Jacksonville	9
Donna Shirley	Charlotte	11
Carol Short	Wilmington	8
Jennifer Watson	Clinton	25
Lawrence Madison	Surf City	21
Paul Walston	Boone	15
Pedro Rogers	Henderson	13
Frank Black	Conetoe	4
Harry Hammer	Bunn	12
Melvin Bower	Statesville	11
Donald Priest	Asheville	16
Ronnie Rivers	Blowing Rock	9
Missy Brown	Henderson	22
Gary Schell	Bunn	20
John Henderson	Clinton	12
Paul Isenberg	Nags Head	6
Hank Greenburg	Wilmington	18
Randy White	Statesville	10
June Flowers	Reidsville	23

COUNTIF

Information: The Countif function counts the number of times a specific word, phrase or number appears in the selected cells.

Format: =COUNTIF(B2:B38,"Charlotte")

Another example: =COUNTIF(C2:C38,12)

In the first example, we are telling Excel to look in cells B2 through B38 and count the number of times the word Charlotte appears. Please note, that when one is looking for a word or words, the words or words must be enclosed in parentheses in the formula.

In the second example we are telling Excel to look in cells C2 through C30 and count the number of times the number 12 appears. When you are looking for a number, you do not need to use parentheses.

The wording can be upper or lower case.

Activity1 : Write a countif command in B39 to count the number of times Asheville appears in the Home Town Column.

Activity 2: Write a countif command in C39 to count the number of times the number 10 appears in the Hours of Community Service Column.

IF statement

Name	Home Town	Hours of Community Service	Exam 1	Exam 2	Exam 3	Exam Average	Bonus Points	Final Average	Final Grade	Letter Grade	Pizza Party??
Bill Adams	Charlotte	5	81	71	77	76	76	76			
Sandra Brown	Dallas	13	71	90	68	76	76	76			
Ted Carpenter	Winston	10	75	70	90	78	78	78			
Doug Dublin	Greenville	9	77	99	78	85	85	85			
Bob Edwards	Wilson	6	93	90	85	89	89	89			
Fred Forther	Rocky Mount	8	87	91	85	88	88	88			
Ralph Green	Charlotte	23	95	92	83	90	90	90			
Don Hunter	Asheville	15	83	86	98	89	89	89			
Ted Jones	Concord	10	82	87	95	88	88	88			
Carol Kitchens	Asheboro	11	79	62	75	72	72	72			
Bob Dale	Boone	7	84	91	78	84	84	84			
Dale Green	Washington	17	83	66	85	85	85	85			
Matt Hardison	Goldsboro	12	76	86	95	86	86	86			
Jenny Jones	New Bern	7	90	94	93	92	92	92			
Laura King	Greensboro	20	96	94	93	94	94	94			
Candy Moore	Graham	12	80	91	75	82	82	82			
Tom Anderson	Sanford	12	88	91	88	89	89	89			
Rick Nelson	Richlands	10	85	87	83	85	85	85			
Cathy Smith	Jacksonville	9	83	85	98	89	89	89			
Donna Shirley	Charlotte	11	85	76	75	79	79	79			
Carol Short	Wilmington	8	71	84	78	78	78	78			
Jennifer Watson	Clinton	25	88	95	80	88	88	88			
Lawrence Madison	Surf City	21	96	96	98	97	97	97			
Paul Walston	Boone	15	72	78	60	70	70	70			
Pedro Rogers	Henderson	13	89	89	55	78	78	78			
Frank Black	Coneloe	4	77	88	73	79	79	79			
Harry Hammer	Bunn	12	73	90	58	74	74	74			
Melvin Bower	Statesville	11	80	81	87	83	83	83			
Donald Priest	Asheville	16	90	98	95	94	94	94			
Ronnie Rivers	Blowing Rock	9	93	90	95	93	93	93			
Missy Brown	Henderson	22	97	96	98	97	97	97			
Gary Schell	Bunn	20	100	100	95	98	98	98			
John Henderson	Clinton	12	95	98	95	96	96	96			
Paul Isenberg	Nags Head	6	89	88	73	83	83	83			
Hank Greenburg	Wilmington	18	77	81	80	79	79	79			
Randy White	Statesville	10	97	89	79	88	88	88			
June Flowers	Reidsville	23	95	95	93	94	94	94			

IF

Information: The if function enters information in a cell depending upon the information contained in another cell.

Example: The teacher plans to give 2 bonus points on the final class grade if the student spent 20 hours or more performing community service. The command to be entered in H2 would be:

=IF(C2>=20,2,0)

What this says if the number in C2 (the hours of community service) is greater than (>) or equal to (=) 20, then enter 2 in this cell. If not then enter a 0. One would then drag this formula down to the other cells in that column.

Note: If you want a text statement to appear, it must be in quotes
Note: Two quotes with nothing between ("") returns nothing. Here are two more examples using text:
=IF(J2<60,"Fails","Passes")

Activity 1: Go ahead and enter the IF command example given above in H2 and then drag it down the H column. How many students will get a 2 point bonus on their final grade?

Activity 2: This teacher also announced that any student who worked 10 or more hours doing community service would get treated to a pizza party. Enter an IF command in L2 that will return a YES statement if the student worked 10 or more hours and a NO statement if the student did not work 10 hours. Copy that command to the rest of the cells in that column.

An "IF" statement has three parts

- 1 - The condition to be met (P15="yes")
- 2 - What happens if the condition is met ("Gold Star")
- 3 - What happens if the condition is not met ("No Gold Star")

Commas are used to separate each condition